

Attorney's Docket No. 032478-005

Application No. 09/639,515

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**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

**LISTING OF CLAIMS:**

1. (Currently Amended) A high-speed, broadband, wireline modem including an adaptive equalizer having both a training mode and a decision-directed, non-training mode, the adaptive equalizer comprising:

at least one of: a forward path coupled to receive the signal samples, the forward path including a forward filter and a decision element, and a feedback path coupled between an output of the decision element and an input of the decision element, the feedback path including a feedback filter; and

means for adapting the one of said forward filter and said feedback filter based on a reinitializable low-complexity fast least squares error criterion performed substantially to the following computation:

$$e_p = e(1 - K^T X_{fan}).$$

wherein  $e$  is the forward prediction error,  $K$  is the Kalmann Gain and  $X$  is an input vector, as distinguished from a least mean squares error criterion.